

**ABSTRACT**

**ACOUSTIC WAVE DEVICE COMPRISING DOMAINS OF ALTERNATING  
POLARIZATION**

The invention relates to an acoustic wave device comprising a layer of ferroelectric material (C) and a substrate (S), characterized in that the layer of ferroelectric material lies between a first electrode ( $E_1$ ) which is deposited on the surface of the substrate or is a constituent part of the substrate and a second electrode ( $E_2$ ) and in that the layer of ferromagnetic material comprises positive first polarization domains ( $D_1$ ) and negative second polarization domains ( $D_2$ ).

For applications in the field of surface wave transducers, it may be advantageous to produce structures with domain inversion with a pitch of the order of a few hundred nanometers, said structures being suitable for applications at high frequencies (of the order of 1 gigahertz).

Figure 2